

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD

PEST MANAGEMENT

(Acre)

CODE 595

DEFINITION

Utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance.

PURPOSES

This practice is applied as part of a Resource Management System (RMS) to support one or more of the following purposes:

- Enhance quantity and quality of commodities.
- Minimize negative impacts of pest control on soil, water, air, plant, and animal resources, and/or humans.

CONDITIONS WHERE PRACTICE APPLIES

Wherever pests will be managed.

CRITERIA

General Criteria Applicable to All Purposes

A pest management component of a conservation plan shall be developed and integrated with other components of the conservation plan.

All methods of pest management must comply with Federal, State, and local regulations, including Utah management plans for groundwater, threatened and endangered species, invasive pest species, noxious weeds and disease vectors.

All method of pest management must comply with the Food Quality Protection Act (FQPA); Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); Worker Protection Standard (WPS); and Interim Endangered Species Protection Program (H7506C).

Integrated Pest Management (IPM) shall be utilized to maintain pest populations below economically damaging levels while minimizing harmful effects on human health and the environment. Refer to USU Extension IPM Web page at:

<http://extension.usu.edu/ipm/>. An appropriate set of mitigation techniques must be planned and implemented to reduce the environmental risks of pest management activities in accordance with quality criteria in the local Field Office Technical Guide. Mitigation techniques include practices such as a Filter Strip or Conservation Crop Rotation, and management techniques such as application method or timing.

Pesticide label instructions regarding environmental hazards and site-specific application criteria shall be followed. Photocopies of Utah State University recommendations must show the date the recommendations were provided.

Additional Criteria to Protect Quantity and Quality of Commodities

Clients shall be encouraged to use the minimum level of pest control necessary to meet their objectives for commodity quantity and quality.

Additional Criteria to Protect Soil Resources

In conjunction with other conservation practices, the number, sequence and timing of tillage operations shall be managed to maintain soil quality and soil loss at or below the soil loss tolerance (T) or level established for highly erodible land. Current water erosion prediction technology will be used on dry cropland where sheet and rill erosion is an identified problem. Current wind erosion technology will be used on lands where wind erosion is an identified problem. The Soil Condition Index will be used for soil quality evaluations where the Conservation Crop Rotation (328) practice is used. The SCI score should indicate a sustainable or improving soil organic matter content. Pesticide label instructions for limiting pesticide residues in soil that may negatively impact non-target plants, animals and humans will be followed.

Additional Criteria to Protect Water Resources

Pest management environmental risks, including the impacts of pesticides in ground and surface water resources shall be evaluated for all identified water resource concerns. The NRCS Windows Pesticide Screening Tool (WIN-PST) will be used to evaluate soil/pesticide interactions.

When a chosen alternative has significant potential to negatively impact important water resources, (e.g., WIN-PST "Extra High", "High" or "Intermediate" soil/pesticide human risk ratings in the drainage area of a drinking water reservoir), an appropriate set of mitigation techniques must be put in place to address risks to humans and non-target plants and animals.

The automated Excel Utah Pesticide Job Sheet shall be used to identify appropriate mitigation techniques by pesticide loss pathway and resource concern (e.g., a Filter Strip, Irrigation Water Management or pesticide incorporation may be appropriate mitigation techniques for pesticide solution loss that is impacting a surface water body.)

Clients shall be encouraged to pay special attention to pesticide label instructions for limiting pesticide residues in leachate and

runoff that may negatively impact non-target plants, animals and humans.

The number, sequence and timing of tillage operations shall be managed in conjunction with other sediment control tactics and practices, in order to minimize sediment losses to nearby surface water bodies.

Follow pesticide label instructions regarding soil texture, depth to water table, and mixing/loading and application setback distances from water bodies.

Additional Criteria to Protect Air Resources

Pesticide label instructions for minimizing volatilization and drift that may negatively impact non-target plants, animals and humans will be followed.

Avoid spray drift by applying pesticides when wind speeds are less than 5 mph or wind direction is away from sensitive areas.

Additional Criteria to Protect Plant Resources

Follow pesticide label instructions including those directed at:

- Removing pesticide residues from sprayers before moving to the next crop.
- Incorporating soil applied pesticides to the depth specified on the label
- Applying pesticides during proper climatic conditions, crop stage, and soil moisture conditions.
- Pesticide residues in soil that may carry over and harm subsequent crops.

Additional Criteria to Protect Animal Resources

Pesticide label instructions that minimize negative impacts to animals will be followed.

Additional Criteria to Protect Humans

Pesticide label instructions for re-entry restrictions, handling and applying pesticides, accidental release, storage, mixing and loading, wearing protective equipment, accidental or unnecessary exposure will be followed.

All pesticide applicators who apply restricted use chemicals are required by the Utah

Department of Agriculture and Food (UDAF) to take the Private Pesticide Applicator Training every three years. All other pesticide users should be encouraged to take the training.

CONSIDERATIONS

The following IPM principles should be considered:

- **Prevention**, such as using pest-free seeds and transplants, cleaning tillage and harvesting equipment between fields, irrigation scheduling to avoid situations conducive to disease development, etc.
- **Avoidance**, such as using pest resistant varieties, crop rotation, trap crops, etc.
- **Monitoring**, such as pest scouting, economic thresholds, soil testing, weather forecasting, etc. to help target suppression strategies and avoid routine preventative pest control.
- **Suppression**, such as cultural, biological and chemical controls, that can reduce a pest population or its impacts. Chemical controls should be used judiciously in order to minimize environmental risk. A variety of control methods should be used to reduce pest resistance.

Encourage producers to select pesticides that adequately protect crops and offer the least potential for surface and ground water contamination.

Plant nutrients, soil moisture, and soil condition should be managed to reduce plant stress, improve plant vigor and increase the plants overall ability to tolerate pests.

On irrigated land, irrigation water should be managed to avoid conditions that cause disease development and to minimize pest management environmental risk.

PLANS AND SPECIFICATIONS

The pest management component of a conservation plan shall be prepared for each field or treatment unit according to the criteria, considerations, and operation and maintenance described in this standard. Specifications shall be recorded using approved specification/job sheets, narrative

statements in the conservation plan, or other acceptable documentation.

As a minimum, the pest management component of a conservation plan shall include:

- Plan map and soil map of managed site.
- Location of sensitive areas and setbacks, if applicable.
- Environmental risk analysis using WIN-PST.
- Interpretation of the environmental risk analysis and identification of appropriate mitigation techniques.
- Hazard Ratings of 'Low' or 'Very Low' require no further action as long as the pesticides are used according to the label. Hazard Ratings of 'Intermediate' require mitigation measures only if located in a sensitive area. 'High' ratings require mitigation measures. Mitigation measures may not be effective for 'Extra High' hazard ratings. In these cases, an effective, economically acceptable pesticide with a lower risk or an alternate method of pest control shall be considered.
- Operation and maintenance requirements.
- Where herbicides are used, guidelines from the current Montana, Wyoming, Utah Weed Control Handbook should be included. For all other pesticides, Utah State University recommendations or qualified consultant recommendations will be included.

OPERATION AND MAINTENANCE

The pest management component of a conservation plan shall include appropriate operation and maintenance items for the client. These may include:

- Review and update the plan periodically in order to incorporate new IPM technology, respond to cropping system and pest complex changes, and avoid the development of pest resistance.
- Maintain mitigation techniques identified in the plan in order to ensure continued effectiveness.

- Develop a safety plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers for individuals exposed to chemicals and the telephone number for the nearest poison control center. The National Pesticide Telecommunications Network (NPTN) telephone number in Corvallis, Oregon may also be given for non-emergency information:

1-800-424-7378

Monday - Friday

6:30 a.m. to 4:30 p.m. Pacific Time

For advice and assistance with emergency spills that involve agrichemicals, the local emergency telephone number should be provided. The national 24-hour CHEMTREC telephone number may also be given:

1-800-424-9300

- Follow label requirements for mixing/loading setbacks from wells, intermittent streams and rivers, natural or impounded ponds and lakes, or reservoirs.
- Prevent the contamination of water supplies by keeping the fillerhose or pipe out of the spray tank. Install an anti-siphon device to prevent backflow. Never leave a spray tank unattended during filling.
- Pesticides used for chemigation shall be labeled for this method of application and all chemigation systems must be fitted with an anti-siphon device to prevent back flow.
- Store pesticides according to label directions and as specified by local, state, and federal regulations.
- Post warning signs according to label directions and/or Federal, State, and local laws around sites that have been treated. Follow restricted entry intervals.
- Dispose of pesticides and pesticide containers in accordance with label directions and adhere to Federal, State, and local regulations.
- Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS).
- Calibrate application equipment according to Utah State University and/or manufacturer recommendations before each seasonal use and with each major chemical change.
- Replace worn nozzle tips, cracked hoses, and faulty gauges.
- Assure that the pesticide applicator knows the exact location of the area to be treated and the potential hazard of spray drift onto surrounding areas.
- Dispose of pesticide wastes and pesticide containers in accordance with label directions and local, state, and federal regulations. Triple rinse pesticide containers and add rinsate to spray solution. Clean application equipment after each use and apply rinsate to an approved site according to label directions. Never reuse pesticide containers for any purpose.
- Maintain records of pest management for at least two years. Pesticide application records shall be kept in accordance with USDA Agricultural Marketing Service's Pesticide Record Keeping Program.